

FIG.1A

GAGGAGTGGAGATGGCGGCGCGGCTCAGGGGGCGGGGAGCCCGTAGAA 60
M A A A A Q G G G E P R R T 17
CCGAGGGGTCGGCCCGGGGTCCCGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGCGCTACACGCAGTTGCAGTACATCGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCAGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAATGTCATCGGCATCCGAGACATTCTGCGGGCGTCCACCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.1B

ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC 420

V Y I V Q D L M E T D L Y K L L K S Q Q 137

AGCTGAGCAATGACCATATCTGCTACTTCTCTACCAGATCCTGCCGGGCCCTCAAGTACA 480

L S N D H I C Y F L Y Q I L R G L K Y I 157

TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540

H S A N V L H R D L K P S N L L I N T T 177

CCTGCGACCTAAGATTGTGATTTCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600

C D L K I C D F G L A R I A D P E H D H 197

ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGTGGTACCGGGGCCCCAGAGATCATGC 660

T G F L T E Y V A T R W Y R A P E I M L 217

TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720

N S K G Y T K S I D I W S V G C I L A E 237

FIG.1C

AGATGCTCTAACC GGCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780

M L S N R P I F P G K H Y L D Q L N H I 257

TTCTGGCCCTTGACCTGCTGGACCGGATGTAACTTTAACCCCAATAACGGATCACAG 840

L A L D L L D R M L T F N P N K R I T V 277

TGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGACGGATGAGCCAG 900

E E A L A H P Y L E Q Y Y D P T D E P V 297

TGGCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTAAGGAGCGGCTGA 960

A E E P F T F A M E L D D L P K E R L K 317

AGGAGCTCATCTTCCAGGAGACAGCAGCTTCCAGCCCGGAGTGTGGAGGCCCCCTAGC 1020

E L I F Q E T A R F Q P G V L E A P * 335

FIG.1D

CCAGACAGACATCTCTGCACCCCTGGGGCCCTGGACCTGCCCTCCTGCCCTCTCCCCGC 1080
CAGACTGTTAGAAAATGGACACTGTGCCAGCCCGGACCTTGGCAGCCCAGGCCGGGTG 1140
GAGCATGGGCCCTGGCCACCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCAAGG 1200
CCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCAGTTCA 1260
ATCTCCCGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGTCAGTTCT 1320
GGAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGCGAGAGGTGGAGGTGGGGGC 1380
GCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTAACCCACCCTAGT 1440
TTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCGGC 1500
CGAATCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGGTG 1560
AGCAGAAGTGAGCTGGGGGCGTGGAGAGCCCGGCGCCCTGCCACCTCCCTGACCCCGT 1620
CTAATATAAATATAGAGATGTGTCTATGGCTG 1654

FIG.2A

GAGGAGTGAGATGGCGGCGGCGGCTCAGGGGGGGGGGGAGCCCCGTAGAA 60
M A A A A Q G G G E P R R T 17
CCGAGGGGTCGGCCCGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGCTACACGCAGTTGCAGTACATCGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGCCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAATGTCATCGGCATCCGAGACATTCTCGGGCGTCCACCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.2B

ATGCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAGCCAGC 420

V Y I V Q D D L M E T D L Y K L L K S Q Q 137

AGCTGAGCAATGACCATATCTGCTACTTCCCTCTACCAGATCCTGCGGGCCTCAAGTACA 480

L S N D H I C Y F L Y Q I L R G L K Y I 157

TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540

H S A N V L H R D L K P S N L L I N T T 177

CCTGCGACCTTAAGATTGTGATTTCGGCCTGGCCCCGGATTGCCGATCCTGAGCATGACC 600

C D L K I C D F G L A R I A D P E H D H 197

ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGTGGTACCGGGCCCCAGAGATCATGC 660

T G F L T E Y V A T R W Y R A P E I M L 217

TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720

N S K G Y T K S I D I W S V G C I L A E 237

FIG.2C

AGATGCTCTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780
M L S N R P I F P G K H Y L D Q L' N H I 257
TTCTGGGCATCCTGGGCTCCCCATCCAGGAGGACCTGAATTGTATCATCAACATGAAGG 840
L G I L G S P S Q E D L N C I I N M K A 277
CCCGAACTACCTACAGTCTCTGCCCTCCAAGACCAAGTGGCTTGGGCCAAGCTTTTCC 900
R N Y L Q S L P S K T K V A W A K L F P 297
CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960
K S D S K A L D L L D R M L T F N P N K 317
AACGGATCACAGTGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTA 1020
R I T V A E E P F T F A M E L D D L P K 337
AGGAGCGGCTGAAGGAGTCACTCTCCAGGAGACAGCACGCTTCAGCCCGGAGTGCTGG 1080
E R L K E L I F Q E T A R F Q P G V L E 357

FIG.2D

AGGCCCCCTAGCCAGACAGACATCTCTGCACCCTGGGGCCTGGACCTGCCCTCCTGCCCTG 1140

A P * 359

CCCCCTCCCCGACACTGTTAGAAATGGACACTGTGCCAGCCCGACCTTGGCAGCC 1200

CAGGCCGGGTGGAGCATGGGCCTGGCCACCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCA 1260

GGCAGGCAAGCCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGT 1320

GGCCCCAGTTCAATCTCCCGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTC 1380

TC TGGCAGTTCTGGAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGCAGAGGTGG 1440

AGGGTGGGGGCGCTGAGTAGGGACTCAGGGCCATGCCCTGCCCCCTCATCTCAATAA 1500

CCCCACCCTAGTTTCCCTGAAGGAACATTCCTTAGTCTCAAGGGCTAGCATCCCTGAGGA 1560

GCCAGCCGGGCGGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTT 1620

CTGTGTGTGTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCGGCGCCCTGCCACC 1680

TCCCTGACCCGCTAAATATATAAATATAGAGATGTGTCTATGGCTG 1726

FIG.3A

GAGGAGTGGAGATGGCGGCGGCGGCTCAGGGGGGGGGAGCCCCGTAGAA 60
M A A A A A Q G G G G E P R R T 17
CCGAGGGGTCCGGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGGCTACACGCAGTTGCAGTACATCGGCGAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GTCGGCCTATGACCACGTGCGCAAGACTCGGTGGCCATCAAGAAGATCAGCCCCCTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGCGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAATGTCATCGGCATCCGAGACATTCTGGGGCGTCCACCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.3B

ATGCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAGCCAGC 420

V Y I V Q D L M E T D L Y K L L K S Q Q 137

AGCTGAGCAATGACCATATCTGCTACTTCTCTACCATCCTGCGGGCCCTCAAGTACA 480

L S N D H I C Y F L Y Q I L R G L K Y I 157

TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540

H S A N V L H R D L K P S N L L I N T T 177

CCTGCGACCTTAAGATTGTGATTTCGGCCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600

C D L K I C D F G L A R I A D P E H D H 197

ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCGAGAGATCATGC 660

T G F L T E Y V A T R W Y R A P E I M L 217

TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720

N S K G Y T K S I D I W S V G C I L A E 237

FIG.3C

AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780

M L S N R P I F P G K H Y L D Q L N H I 257

TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG 840

L G I L G S P S Q E D L N C I I N M K A 277

CCCGAACTACCTACAGTCTCTGCCCTCCAAGACCAAGTGGCTTGGGCCAAGCTTTTCC 900

R N Y L Q S L P S K T K V A W A K L F P 297

CCAAGTCAGACTCCAAGCCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960

K S D S K A L D L L D R M L T F N P N K 317

AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCTACCTGGAGCAGTACTATGACCCGA 1020

R I T V E E A L A H P Y L E Q Y Y D P T 337

CGGATGAGCCAGTGGCCGAGGAGCCCTTCACCTTCGCCATGGAGCTGGATGACCTACCTA 1080

D E P V A E E P F T F A M E L D D L P K 357

FIG.3D

AGGAGCGGCTGAAGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCCGAGTGCTGG 1140

E R L K E L I F Q E T A R F Q P G V L E 377

AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAACAGAACTGGCAAAG 1200

A P * 379

AGGCAAGAGGTCACTGAGGGCCTCTGTCACCCAGGACCTGCCTCCTGCCCTGCCCTCTCC 1260

CGCCAGACTGTTAGAAATGGACACTGTGCCCCAGCCCCGACCTTGGCAGCCCAGGCCGGG 1320

GTGGAGCATGGCCCTGGCCACCTCTCTCCCTTGTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA 1380

AGGCCCTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT 1440

TCAATCTCCCGCTGCTGCTGCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT 1500

TCTGGAAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGCAGAGGTGGAGGGTGGGG 1560

GGCGCTGAGTAGGGACTCAGGGCCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCT 1620

AGTTTCCCTGAAGGAACATTCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG 1680

FIG.3E

GGCCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGCGTGCCCCCTCGCTGCTTCTGTGTGTG 1740
GTGAGCAGAAAGTGGAGCTGGGGGGCGTGGAGAGCCCGGCCCTGCCACCTCCCTGACC 1800
CGTCTAATATATAAATATAGAGATGTGTCTATGGCTG 1837

FIG.4A

GAGGAGTGGAGATGGCGCGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA 60
M A A A A Q G G G E P R R T 17
CCGAGGGGTCCGGCCCGGGTCCCGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCCG 120
E G V G P G V P G E V E M V K G Q P F D 37
ACGTGGCCCGCGCTACACGCAGTTGCAGTACATCGGCAGGGCGGTACGGCATGGTCA 180
V G P R Y T Q L Q Y I G E G A Y G M V S 57
GCTCGGCTATGACCACGTGCGCAAGACTCGCGTGGCCATCAAGAAGATCAGCCCCCTTCG 240
S A Y D H V R K T R V A I K K I S P F E 77
AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGCTTCCGCC 300
H Q T Y C Q R T L R E I Q I L L R F R H 97
ATGAGAAATGTCATCGGCATCCGAGACATTCTCGGGCGTCCACCCCTGGAAGCCATGAGAG 360
E N V I G I R D I L R A S T L E A M R D 117

FIG.4B

ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAGCCAGC 420
V Y I V Q D L M E T D L Y K L L K S Q Q 137
AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGCCTCAAGTACA 480
L S N D H I C Y F L Y Q I L R G L K Y I 157
TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA 540
H S A N V L H R D L K P S N L L I N T T 177
CCTGCGACCTTAAGATTGTGATTTCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC 600
C D L K I C D F G L A R I A D P E H D H 197
ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC 660
T G F L T E Y V A T R W Y R A P E I M L 217
TGAACTCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG 720
N S K G Y T K S I D I W S V G C I L A E 237

FIG.4C

AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCACA 780
M L S N R P I F P G K H Y L D Q L N H I 257
TTCTGGGCATCCTGGGCTCCCCATCCAGGAGGACCTGAATTGTATCATCAACATGAAGG 840
L G I L G S P S Q E D L N C I I N M K A 277
CCCGAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGCCAAGCTTTTCC 900
R N Y L Q S L P S K T K V A W A K L F P 297
CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAACCCCAATA 960
K S D S K A L D L L D R M L T F N P N K 317
AACGGATCACAGTGGCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA 1020
R I T V A E E P F T F A M E L D D L P K 337

FIG.4D

AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG 1080

E R L K E L I F Q E T A R F Q P G V L E 357

AGGCCCCCTAGCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAACAGAACTGGCAAAG 1140

A P *

359

FIG.4E

AGGCAAGAGGTCACTGAGGGCCTCTGTACCCAGGACCTGCCTCCTGCCTGCCCTCTCC 1200
CGCCAGACTGTTAGAAATGGACACTGTGCCCCAGCCCCGGACCTTGGCAGCCCAGGCCGGG 1260
GTGGAGCATGGGCCTGGCCACCTCTCTCCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA 1320
AGGCCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGGAGCTCAGGTGGCCCCCAGT 1380
TCAATCTCCCGCTGCTGCTGCTGCCGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT 1440
TCTGGAATGGAAGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG 1500
GGCGCTGAGTAGGGACTCAGGGCCATGCCTGCCCCCCTCATCTCATTTCAAACCCACCCCT 1560
AGTTTCCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCCTGAGGAGCCAGGCCG 1620
GGCCGAATCCCCTGTCAAAGCTGTCACTTCGCGTGCCCTCGCTGCTTCTGTGTGTG 1680
GTGAGCAGAAGTGGAGCTGGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC 1740
CGTCTAATATATAAATATAGAGATGTGTCTATGGCTG 1777

FIG.5A

1

60

SMAPK3V1 GAGGAGTGGAGATGGCCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA
SMAPK3V2 GAGGAGTGGAGATGGCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA
SMAPK3 GAGGAGTGGAGATGGCCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA
SMAPK3V3 GAGGAGTGGAGATGGCCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA
SMAPK3V4 GAGGAGTGGAGATGGCGGCGCGGCTCAGGGGGCGGGGAGCCCCGTAGAA

61

120

SMAPK3V1 CCGAGGGGTCCGCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCC
SMAPK3V2 CCGAGGGGTCCGCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCC
SMAPK3 CCGAGGGGTCCGCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCC
SMAPK3V3 CCGAGGGGTCCGCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCC
SMAPK3V4 CCGAGGGGTCCGCCCGGGGTCCCGGGGAGGTGGAGATGGTGAAGGGCAGCCGTTCC

FIG.5B

121

180

SMAPK3V1 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGCGGAGGGCGGTACGGCATGGTCA
SMAPK3V2 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGCGGAGGGCGGTACGGCATGGTCA
SMAPK3 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGCGGAGGGCGGTACGGCATGGTCA
SMAPK3V3 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGCGGAGGGCGGTACGGCATGGTCA
SMAPK3V4 ACGTGGGCCCCGCTACACGCAGTTGCAGTACATCGCGGAGGGCGGTACGGCATGGTCA

181

240

SMAPK3V1 GCTCGGCCCTATGACCACGTGGGCAAGACTCGCGTGGCCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V2 GCTCGGCCCTATGACCACGTGGGCAAGACTCGCGTGGCCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3 GCTCGGCCCTATGACCACGTGGGCAAGACTCGCGTGGCCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V3 GCTCGGCCCTATGACCACGTGGGCAAGACTCGCGTGGCCCATCAAGAAGATCAGCCCCCTTCG
SMAPK3V4 GCTCGGCCCTATGACCACGTGGGCAAGACTCGCGTGGCCCATCAAGAAGATCAGCCCCCTTCG

FIG.5C

241

300

SMAPK3V1 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGGCTTCCGCC
SMAPK3V2 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGGCTTCCGCC
SMAPK3 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGGCTTCCGCC
SMAPK3V3 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGGCTTCCGCC
SMAPK3V4 AACATCAGACCTACTGCCAGCGCACGCTCCGGGAGATCCAGATCCTGCTGGGCTTCCGCC

301

360

SMAPK3V1 ATGAGAATGTATCGGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V2 ATGAGAATGTATCGGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3 ATGAGAATGTATCGGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V3 ATGAGAATGTATCGGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG
SMAPK3V4 ATGAGAATGTATCGGGCATCCGAGACATTCTGCGGGCGTCCACCCCTGGAAGCCATGAGAG

FIG.5D

361

420

SMAPK3V1 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V2 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V3 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC
SMAPK3V4 ATGTCTACATTGTGCAGGACCTGATGGAGACTGACCTGTACAAGTTGCTGAAAAGCCAGC

421

480

SMAPK3V1 AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V2 AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3 AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V3 AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA
SMAPK3V4 AGCTGAGCAATGACCATATCTGCTACTTCCTCTACCAGATCCTGCGGGGCCCTCAAGTACA

FIG.5E

481

540

SMAPK3V1 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V2 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V3 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA
SMAPK3V4 TCCACTCCGCCAACGTGCTCCACCGAGATCTAAAGCCCTCCAACCTGCTCATCAACACCA

541

600

SMAPK3V1 CCTGCGACCTTAAGATTTGTGATTTCCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V2 CCTGCGACCTTAAGATTTGTGATTTCCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3 CCTGCGACCTTAAGATTTGTGATTTCCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V3 CCTGCGACCTTAAGATTTGTGATTTCCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC
SMAPK3V4 CCTGCGACCTTAAGATTTGTGATTTCCGGCCTGGCCCGGATTGCCGATCCTGAGCATGACC

FIG.5F

601

660

SMAPK3V1 ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V2 ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3 ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V3 ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC
SMAPK3V4 ACACCGGCTTCCTGACGGAGTATGTGGCTACGCGCTGGTACCGGGCCCCAGAGATCATGC

661

720

SMAPK3V1 TGAAC TCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V2 TGAAC TCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3 TGAAC TCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V3 TGAAC TCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG
SMAPK3V4 TGAAC TCCAAGGGCTATACCAAGTCCATCGACATCTGGTCTGTGGGCTGCATTCTGGCTG

FIG.5G

721

780

SMAPK3V1 AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCCACA
SMAPK3V2 AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCCACA
SMAPK3 AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCCACA
SMAPK3V3 AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCCACA
SMAPK3V4 AGATGCTCTTAACCGGCCCATCTTCCCTGGCAAGCACTACCTGGATCAGCTCAACCCACA

781

840

SMAPK3V1 TTCTGG-----
SMAPK3V2 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3V3 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG
SMAPK3V4 TTCTGGGCATCCTGGGCTCCCCATCCCAGGAGGACCTGAATTGTATCATCAACATGAAGG

FIG.5H

900

841

SMAPK3V1 -----
SMAPK3V2 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC
SMAPK3 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC
SMAPK3V3 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC
SMAPK3V4 CCCGAAACTACCTACAGTCTCTGCCCTCCAAGACCAAGGTGGCTTGGGCCAAGCTTTTCC

960

901

SMAPK3V1 -----CCCTTGACCTGCTGGACCGGATGTTAACCTTTAAACCCCAATA
SMAPK3V2 CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAAACCCCAATA
SMAPK3 CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAAACCCCAATA
SMAPK3V3 CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAAACCCCAATA
SMAPK3V4 CCAAGTCAGACTCCAAGCCCTTGACCTGCTGGACCGGATGTTAACCTTTAAACCCCAATA

FIG.5I

961

1020

SMAPK3V1 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCCTACCTGGAGCAGTACTATGACCCCGA
SMAPK3V2 AACGGATCACAGTGG-----
SMAPK3 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCCTACCTGGAGCAGTACTATGACCCCGA
SMAPK3V3 AACGGATCACAGTGGAGGAAGCGCTGGCTCACCCCCTACCTGGAGCAGTACTATGACCCCGA
SMAPK3V4 AACGGATCACAGTGG-----

1021

1080

SMAPK3V1 CGGATGAGCCAGTGGCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V2 -----CCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3 CGGATGAGCCAGTGGCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V3 CGGATGAGCCAGTGGCCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA
SMAPK3V4 -----CCGAGGAGCCCTTCACCTTCGCCCATGGAGCTGGATGACCTACCTA

FIG.5J

1081

1140

SMAPK3V1 AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG
SMAPK3V2 AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG
SMAPK3 AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG
SMAPK3V3 AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG
SMAPK3V4 AGGAGCGGCTGAAGGAGCTCATCTTCCAGGAGACAGCACGCTTCCAGCCCGGAGTGCTGG

1141

1200

SMAPK3V1 AGGCCCCCTAGCCCCAGACAGACATCTCTGCAGCCTGGGGCCTGGA-----
SMAPK3V2 AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGA-----
SMAPK3 AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGA-----
SMAPK3V3 AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAAACAGAACTGGCAAAG
SMAPK3V4 AGGCCCCCTAGCCCCAGACAGACATCTCTGCACCCCTGGGGCCTGGAAACAGAACTGGCAAAG

FIG.5K

1201

1260

SMAPK3V1 -----CCTGCCCTCCTGCCCTGCCCTCTCTCC

SMAPK3V2 -----CCTGCCCTCCTGCCCTGCCCTCTCTCC

SMAPK3 -----CCTGCCCTCCTGCCCTGCCCTCTCTCC

SMAPK3V3 AGGCAAGAGGTCACCTGAGGGCCCTCTGTCAACCAGGACCTGCCCTGCCCTCTCTCC

SMAPK3V4 AGGCAAGAGGTCACCTGAGGGCCCTCTGTCAACCAGGACCTGCCCTGCCCTCTCTCC

1261

1320

SMAPK3V1 CGCCAGACTGTTAGAAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCCAGGCCGGG

SMAPK3V2 CGCCAGACTGTTAGAAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCCAGGCCGGG

SMAPK3 CGCCAGACTGTTAGAAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCCAGGCCGGG

SMAPK3V3 CGCCAGACTGTTAGAAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCCAGGCCGGG

SMAPK3V4 CGCCAGACTGTTAGAAAAATGGACACTGTGCCCCAGCCCGGACCTTGGCAGCCCAGGCCGGG

FIG.5L

1321

1380

SMAPK3V1 GTGGAGCATGGGCTGGCCACCTCTCTCTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V2 GTGGAGCATGGGCTGGCCACCTCTCTCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3 GTGGAGCATGGGCTGGCCACCTCTCTCTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V3 GTGGAGCATGGGCTGGCCACCTCTCTCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA
SMAPK3V4 GTGGAGCATGGGCTGGCCACCTCTCTCTTTGCTGAGGCCCTCCAGCTTCAGGCAGGCCA

1381

1440

SMAPK3V1 AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGAGCTCAGGTGGCCCCCAGT
SMAPK3V2 AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGAGCTCAGGTGGCCCCCAGT
SMAPK3 AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGAGCTCAGGTGGCCCCCAGT
SMAPK3V3 AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGAGCTCAGGTGGCCCCCAGT
SMAPK3V4 AGGCCTTCTCCTCCCCACCCGCCCTCCCCACGGGGCCTCGGAGCTCAGGTGGCCCCCAGT

FIG.5M

1441

1500

SMAPK3V1 TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V2 TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3 TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V3 TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT
SMAPK3V4 TCAATCTCCCGCTGCTGCTGCGGCCCTTACCTTCCCCAGCGTCCCAGTCTCTGGCAGT

1501

1560

SMAPK3V1 TCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V2 TCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3 TCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V3 TCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG
SMAPK3V4 TCTGGAATGGAAGGGTTCTGGCTGCCCCCAACCTGCTGAAGGGCAGAGGTGGAGGGTGGGG

FIG.5N

1561

1620

SMAPK3V1 GCGCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V2 GCGCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3 GCGCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V3 GCGCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

SMAPK3V4 GCGCTGAGTAGGACTCAGGGCCATGCCCTGCCCCCTCATCTCATTTCAAACCCACCCCT

1621

1680

SMAPK3V1 AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V2 AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3 AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V3 AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

SMAPK3V4 AGTTCCCTGAAGGAACATTCCCTTAGTCTCAAGGGCTAGCATCCCTGAGGAGCCAGGCCG

FIG.50

1681

1740

SMAPK3V1 GGGCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGGGTGCCCCCTGGCTGCTTCTGTGTGTG
SMAPK3V2 GGGCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGGGTGCCCCCTGGCTGCTTCTGTGTGTG
SMAPK3 GGGCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGGGTGCCCCCTGGCTGCTTCTGTGTGTG
SMAPK3V3 GGGCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGGGTGCCCCCTGGCTGCTTCTGTGTGTG
SMAPK3V4 GGGCGAATCCCCCTCCCTGTCAAAGCTGTCACTTCGGGTGCCCCCTGGCTGCTTCTGTGTGTG

1741

1800

SMAPK3V1 GTGAGCAGAAAGTGGAGCTGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC
SMAPK3V2 GTGAGCAGAAAGTGGAGCTGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC
SMAPK3 GTGAGCAGAAAGTGGAGCTGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC
SMAPK3V3 GTGAGCAGAAAGTGGAGCTGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC
SMAPK3V4 GTGAGCAGAAAGTGGAGCTGGGGGCGTGGAGAGCCCCGGCGCCCCCTGCCACCTCCCTGACC

FIG.5P

1801

| | | |
|----------|--|------|
| SMAPK3V1 | CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG | 1654 |
| SMAPK3V2 | CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG | 1726 |
| SMAPK3 | CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG | 1786 |
| SMAPK3V3 | CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG | 1837 |
| SMAPK3V4 | CGTCTAATATATAAAATATAGAGATGTGTCTATGGCTG | 1777 |

FIG.6A

1 60
SMAPK3V1 MAAAAAQQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V2 MAAAAAQQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3 MAAAAAQQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V3 MAAAAAQQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY
SMAPK3V4 MAAAAAQQGGGGEPRRTEGVGPGVPGEVEMVKGPFDVGPRYTQLQYIGEGAYGMVSSAY

61 120
SMAPK3V1 DHVRKTRVAIKKISPFEEHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V2 DHVRKTRVAIKKISPFEEHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3 DHVRKTRVAIKKISPFEEHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V3 DHVRKTRVAIKKISPFEEHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI
SMAPK3V4 DHVRKTRVAIKKISPFEEHQTYCQRTLREIQILLRFRHENVIGIRDILRASTLEAMRDVYI

FIG.6B

121

180

SMAPK3V1 VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL
SMAPK3V2 VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL
SMAPK3 VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL
SMAPK3V3 VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL
SMAPK3V4 VQDLMETDLYKLLKSQQLSNDHICYFLYQILRGLKYIHSANVLHRDLKPSNLLINTTCDL

181

240

SMAPK3V1 KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS
SMAPK3V2 KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS
SMAPK3 KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS
SMAPK3V3 KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS
SMAPK3V4 KICDFGLARIADPEHDHTGFLTEYVATRWYRAPEIMLSKGYTKSIDIWSVGCILAEMLS

FIG.6C

241

300

SMAPK3V1 NRPIFPGKHYYLDQNLHIL-----
 SMAPK3V2 NRPIFPGKHYYLDQNLHILGILGSPSQEDLNCIINMKARNYLQSLPSKTKVAWAKLFPKSD
 SMAPK3 NRPIFPGKHYYLDQNLHILGILGSPSQEDLNCIINMKARNYLQSLPSKTKVAWAKLFPKSD
 SMAPK3V3 NRPIFPGKHYYLDQNLHILGILGSPSQEDLNCIINMKARNYLQSLPSKTKVAWAKLFPKSD
 SMAPK3V4 NRPIFPGKHYYLDQNLHILGILGSPSQEDLNCIINMKARNYLQSLPSKTKVAWAKLFPKSD

301

360

SMAPK3V1 --ALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEPPFTFAMELDDLPKERL
 SMAPK3V2 SKALDLLDRMLTFNPNKRITV-----AEEPFTFAMELDDLPKERL
 SMAPK3 SKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEPPFTFAMELDDLPKERL
 SMAPK3V3 SKALDLLDRMLTFNPNKRITVEEALAHPLYEQYYDPTDEPVAEPPFTFAMELDDLPKERL
 SMAPK3V4 SKALDLLDRMLTFNPNKRITV-----AEEPFTFAMELDDLPKERL

FIG.6D

361

| | | |
|----------|--------------------------|-----|
| SMAPK3V1 | KELIFQETARFQPGVLEAP----- | 335 |
| SMAPK3V2 | KELIFQETARFQPGVLEAP----- | 359 |
| SMAPK3 | KELIFQETARFQPGVLEAP----- | 379 |
| SMAPK3V3 | KELIFQETARFQPGVLEAP----- | 379 |
| SMAPK3V4 | KELIFQETARFQPGVLEAP----- | 359 |